Warm-up

Solution or not?

① $-x+y=5$

$2x+y=8$

$(\overset{x}{0}, \overset{y}{5})$

$-(0)+(5)=5$

$0+5=5$ yes

$2(0)+(5)=8$

$0+5=8$ no

Not a Solution

Must work in both equations!

② $2x+5y=7$

$-x+2y=-8$

$(\overset{x}{6}, \overset{y}{-1})$

$2(6)+5(-1)=7$

$12+-5=7$ yes.

$-(6)+2(-1)=-8$

$-6+-2=-8$

yes.

Solution!

7.1 Solve Linear Eqns by Graphing

* 2 or more lines

Two ways to Graph

① Slope - Intercept form

$y = mx + b$

$m = \frac{\text{rise}}{\text{run}}$ or slope = directions to the next point

b = Start pt on y-axis

$3x + 2y = 10$ ⟶ move the $3x$ to other side

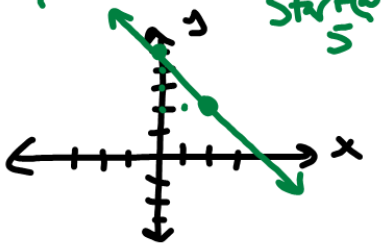
$-3x \qquad -3x$

$\frac{2y}{2} = \frac{10}{2} - \frac{3x}{2}$ ⟶ divid by 2

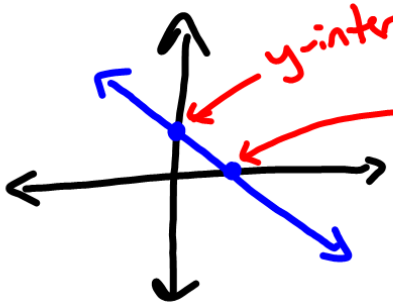
$y = 5 - \frac{3}{2}x$

$m = -\frac{3}{2} \quad b = 5$

$\frac{-3}{2} = \frac{\downarrow 3}{\rightarrow 2}$



② Intercepts



Finding them

$3x - 2y = 6$

x-int: Ignore $-2y$ & Solve for x

$3x = 6$

$x = 2$

$(2, 0)$

y-int: Ignore $3x$ & solve for y

$-2y = 6$

$y = -3$

$(0, -3)$